

Feb 5th, 9:00 AM - 11:00 AM

## Library in Your Pocket

Kim Griggs  
*Oregon State University*

Laurie Bridges  
*Oregon State University*

Hannah Gascho Rempel  
*Oregon State University*

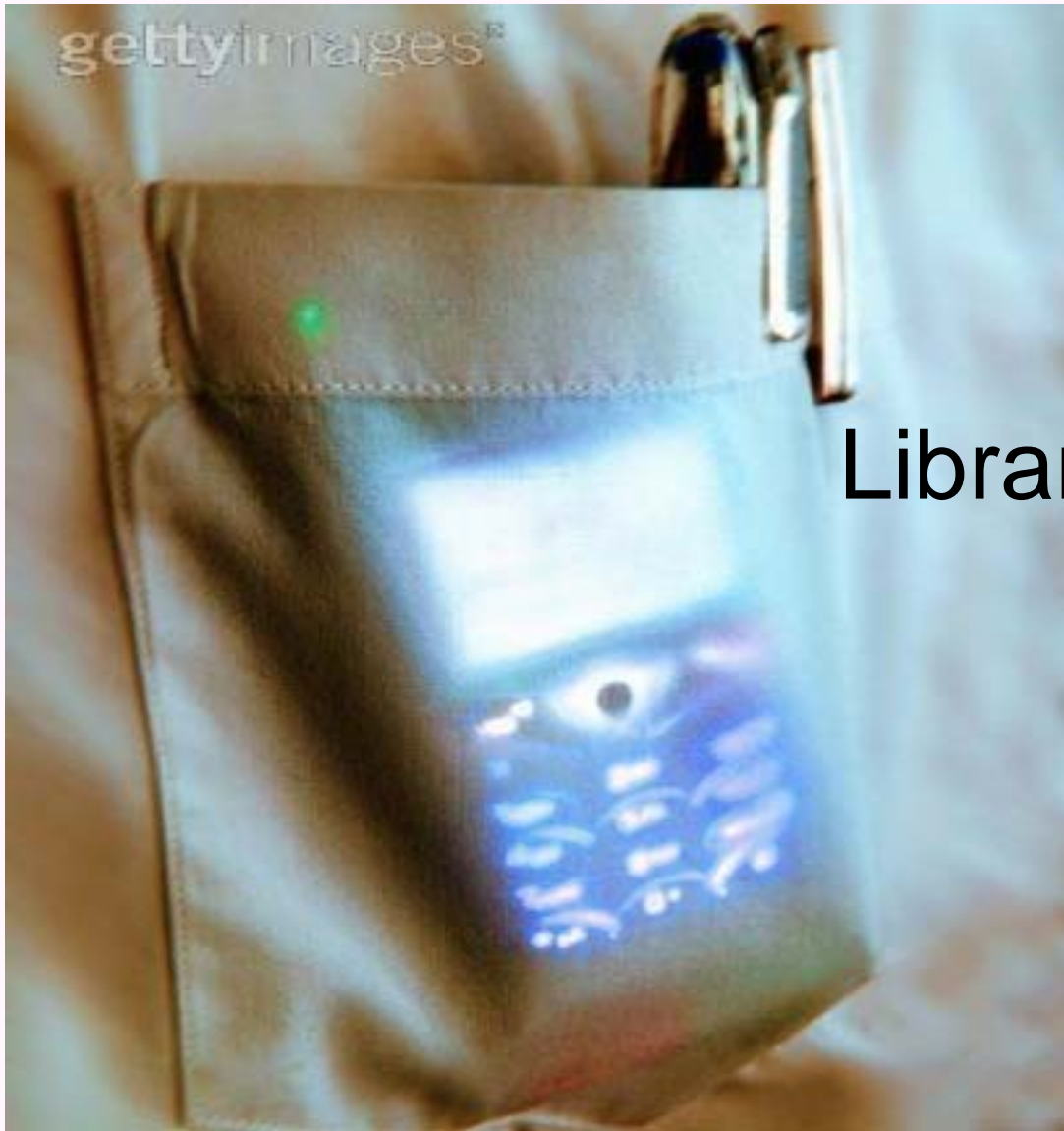
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# Library in Your Pocket

Online Northwest  
Feb. 5, 2010

Kim Griggs  
Hannah Gascho Rempel  
(and Laurie Bridges)  
*Oregon State University  
Libraries*



# Reasons to go mobile



## HARVARD LIBRARIES

ACCESS TO HARVARD UNIVERSITY LIBRARY RESOURCES

**Digital Collections at Harvard**

Harvard provides open, online access to a growing number of its subject-specific collections, including [South Central China and Tibet: Hotspot of Diversity](#). [View more collections.](#)

**J-Term Hours:** Library hours will vary from January 4 to 24. Remember to [confirm hours](#) for any library that you plan to visit during the J-Term.

**New Exhibit: "Bubbles, Panics & Crashes: A Century of Financial Crises, 1830s-1930s"**

Financial crises have happened before, and, if history is any guide, they will happen again. Baker Library Historical Collection revisits four financial crises — 1837, 1873, 1907, and 1929 — when asset price-bubbles burst, shattered public confidence, and devastated financial markets around the world. [Exhibit highlights.](#)

**An Online View of Islamic Manuscripts, Texts, and Maps:** Harvard's Open Collections Program has digitized more than 145,000 digital pages from Islamic manuscripts, maps, and published texts located in the University's libraries and museums. The result is the Islamic Heritage Project, a new digital collection developed in collaboration with the Prince Alwaleed Bin Talal Islamic Studies Program. [Explore the collection.](#)

**WELCOME TO THE HARVARD LIBRARIES**

This web site is an online gateway to the extraordinary library resources of Harvard University and serves as an important research tool for Harvard's current students, faculty, staff, and researchers who hold Harvard IDs and PINs. The site also provides practical information on each of the more than 70 libraries that form the Harvard system. Visitors and guests should consult the Library's [Frequently Asked Questions](#) before navigating the site.

**HOLLIS CATALOGS**

HOLLIS  
HOLLIS Classic  
[About HOLLIS Catalogs](#)

**OTHER CATALOGS**

DASH - Scholarly Repository  
Google Book Search  
Harvard Cross-Catalog Search  
Harvard Geospatial Library  
IGSS Dataverse Network  
OASIS - Archival Finding Aids  
VIA - Visual Resources  
WAX - Web Archive  
[Catalogs beyond Harvard](#)

**E-RESEARCH**

Find E-Resources  
Find E-Journals  
Quick Search  
Cross Search  
My Research  
Research Tools  
[E-Research Home](#)

**RESEARCH TOOLS**

Research Tools  
Citation Linker  
Interlibrary Loan  
RefWorks  
Harvard LibX  
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Research Guides

**LIBRARIES**

Locations  
Hours  
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FAQ for Visitors  
List of Harvard Libraries  
Archives and Special Collections  
Digital Collection Highlights  
Library Users with Disabilities  
Events and Exhibitions  
University Library Programs

[Comments & Questions](#)

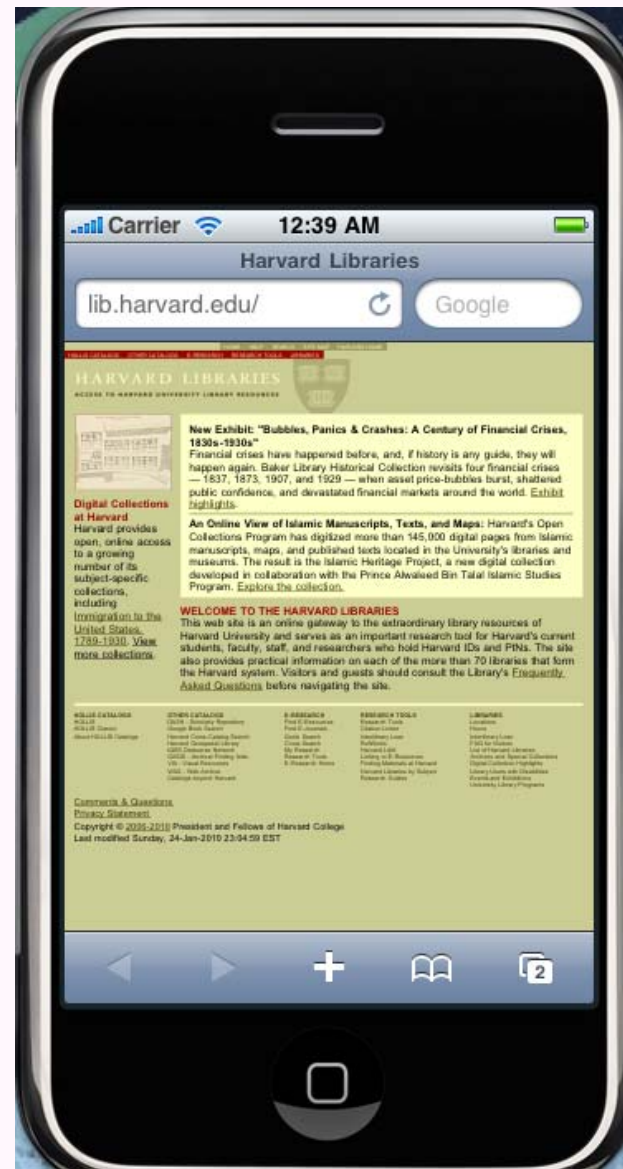
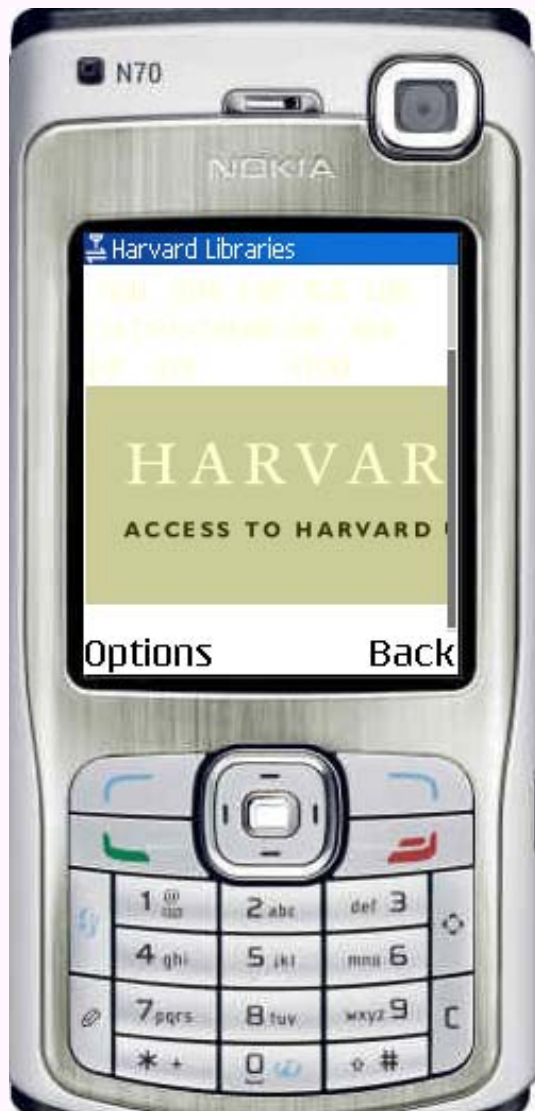
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Last modified Monday, 04-Jan-2010 17:12:23 EST







<http://lib.harvard.edu/>



# Why a mobile library site?

Mobile sites are not just smaller versions of your current site

- They need their own design
- Users are more likely to have “goal-oriented intentions”



The screenshot shows a mobile browser interface with a status bar at the top displaying 'AT&T', signal strength, Wi-Fi, and the time '01:33 PM'. The browser title is 'TestiPhone.com - iPhone Simulator'. The address bar shows the URL 'wiki/National\_Football\_League#Salaries'. The page title is 'Salaries' with an '[edit]' link. The main content is a table titled 'Salary for League Year<sup>[43]</sup>'. The table has columns for the years 2008, 2009, 2010, 2011, and 2012. The first row of data shows salaries of \$295,000, \$310,000, \$325,000, \$340,000, and \$355,000 respectively. The value '\$310,000' is circled in red. The table continues with 10 more rows of data. At the bottom of the table, there is a note: 'A player's salary, as defined by the CBA, includes any'. The browser's bottom navigation bar contains icons for back, forward, home, and tabs.

	2008	2009	2010	2011	2012
0	\$295,000	\$310,000	\$325,000	\$340,000	\$355,000
0	\$370,000	\$385,000	\$400,000	\$415,000	\$430,000
0	\$445,000	\$460,000	\$475,000	\$490,000	\$505,000
0	\$520,000	\$535,000	\$550,000	\$565,000	\$580,000
0	\$605,000	\$620,000	\$635,000	\$650,000	\$665,000
0	\$730,000	\$745,000	\$760,000	\$775,000	\$790,000
0	\$830,000	\$845,000	\$860,000	\$875,000	\$890,000

A player's salary, as defined by the CBA, includes any



# Mobilized vs. Miniaturized



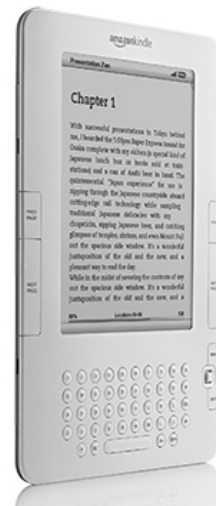
Library Examples



## Shop All Departments

- Books >
- Movies, Music & Games >
- Digital Downloads >
- Kindle >
- Computers & Office >
- Electronics >
- Home & Garden >
- Grocery, Health & Beauty >
- Toys, Kids & Baby >
- Clothing, Shoes & Jewelry >
- Sports & Outdoors >
- Tools, Auto & Industrial >

Search All Departments



# Kindle

## #1 Bestselling Product on Amazon

Order now

amazonkindle

## Help Victims of the Haiti Earthquake



Please donate to Mercy Corps to help victims of the [Haiti earthquake](#). Thank you for making a donation in this time of great need.

[Learn more and donate](#)

## Jet JW1044 4-to-2-1/2-Inch Reducer



Ideal for woodworkers with Shop-Vacs or the equivalent, the Jet 4-Inch... [Read more](#)  
**\$1.29**

## Save Energy and Money with LEDs



Replace energy-consuming incandescent bulbs with [LEDs](#), which provide higher-quality light and use less energy than other types of bulbs.

[See more in Lighting & Electrical](#)

## Bestsellers

## Electronics: Digital Cameras

Updated hourly



1. 324 days in the top 100  
**Nikon Coolpix L20 10MP Digital Camera with 3.6...**  
Nikon  
[Click for details](#)



2. 286 days in the top 100  
**Canon PowerShot SD1200IS 10 MP Digital Camera...**  
Canon  
~~\$299.99~~ **\$149.00**



3. 24 days in the top 100  
**Olympus Evolt E520 10MP Digital SLR Camera with...**  
Olympus

## Check This Out



**Returns Are Easy**  
Visit our self-service Online Returns Center.



**New Year, New You in 2010**  
Get going on your resolutions.



**Trade In Books**  
Send in your books, Get Amazon.com Gift Cards.

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## Selling with Amazon

Publish on Kindle  
Sell Your Stuff  
Fulfillment by Amazon  
WebStore by Amazon  
Advantage Program  
Associates Program  
Amazon Payments

## Amazon Exclusives

Amazon Prime  
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## New For You®



[Monk Season 8](#) Video On Demand

[Fix this recommendation](#)[See more new releases](#)

[Psych Season 1](#) Video On Demand

[Fix this recommendation](#)

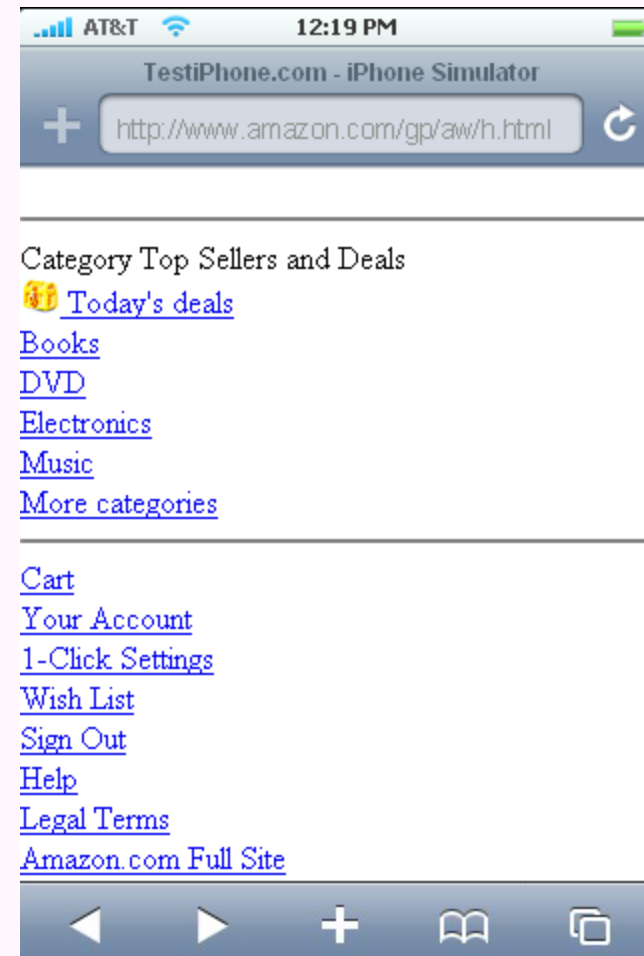
[Monk Season 6](#) Video On Demand

[Fix this recommendation](#)

[Monk Season 2](#) Video On Demand

[Fix this recommendation](#)





Amazon

<http://www.amazon.com/gp/aw/h.html>





Web Images Video Local Shopping More

Web Search

My Yahoo! | Make Y! your homepage

Hi, Marc & Hannah | What are you do... | Sign Out | Page Options

### My Favorites + Add

- View Yahoo! Sites
- Yahoo! Mail
- Finance (Dow Jones ↑)
- TV
- Facebook
- Weather (54°F)
- Sports
- Gmail
- Flickr
- Games
- Movies
- Music
- omg!
- Personals

1 2

Edit

Add

### RECOMMENDED

- Travel
- Shopping
- Deal Of The Day
- WSJ

TODAY - January 14, 2010



### Massive relief effort a 'logistical nightmare'

As supplies begin to pour into quake-stunned Haiti, aid workers run into daunting challenges. » **'It's chaos'**

- Aftermath, aerial pics
- Red Cross death estimate
- Status on flights to Haiti



Chaos in Haiti as aid arrives



8-year-old on U.S. watch list



Why Haiti is so disaster-prone



Obama seeks 'bailout tax'

1 - 4 of 20

NEWS WORLD LOCAL FINANCE

- Obama pledges \$100M for Haiti, enlists former presidents' help
- Satellite imagery captures extent of Haiti quake devastation
- Officials say tentative deal is reached on health bill tax
- House subpoenas Geithner's AIG emails and phone logs
- Survey: Nearly half of American adults bring work home
- New York City's 'skinniest' house sells for \$2.1 million
- Fire Calls (Jan. 14) - Corvallis Gazette-Times
- Study: 1 in 20 Oregon 8th graders play... - KVAL
- Arsonist denied early release - Register-Guard
- NFL · NBA · NCAA · NHL · Tennis · Soccer

updated 12:22 pm PST

More: [News](#) [Popular](#) [Buzz](#)

### TRENDING NOW

- |                      |                        |
|----------------------|------------------------|
| 1. Haiti Earthquake  | 6. Sarah Palin         |
| 2. Space Station     | 7. Heidi Klum          |
| 3. Teddy Pendergrass | 8. Martin Luther Ki... |
| 4. George Clooney    | 9. USC Football        |
| 5. Afghanistan       | 10. Tiger Woods        |



Free BlackBerry Sale - Ad Feedback

### Most emailed news photos



Palace before and after earthquake



Firefighter gives water to rescue dog



Worker packs emergency health kits



Man tries out one-seat car at auto show

1 of 5



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Yahoo





Yahoo

<http://m.yahoo.com>



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Public  
Library

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Locations and Hours  
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Classes, Programs & Exhibitions  
Blogs, Videos & Publications  
Support the Library  
Ask NYPL

#### SEARCH

author, title or keyword

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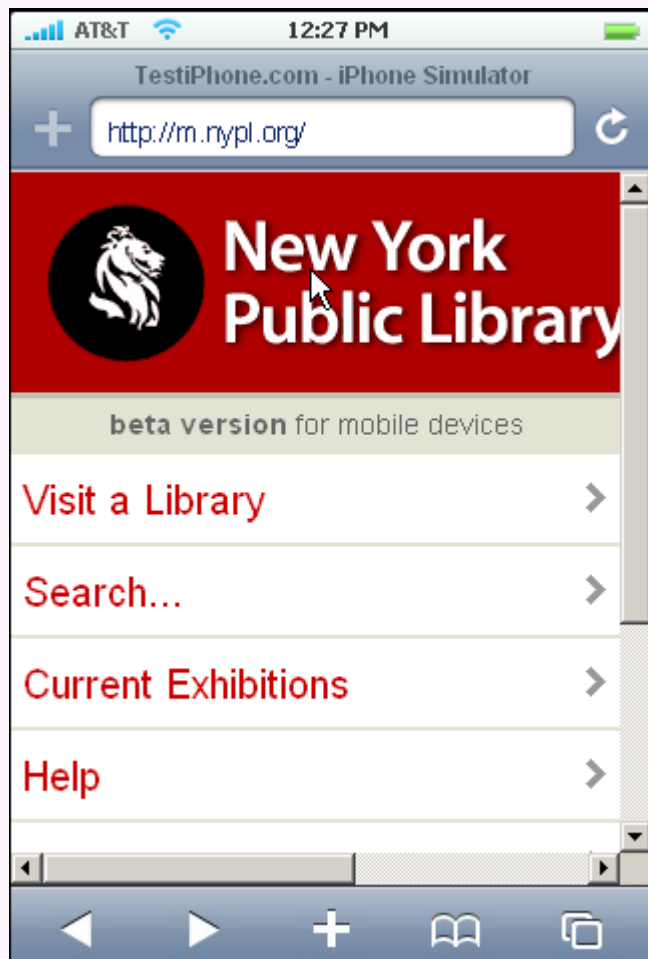
[MEET WINNIE-THE-POOH! >](#)

[LINCOLN CENTER TURNS 50 >](#)

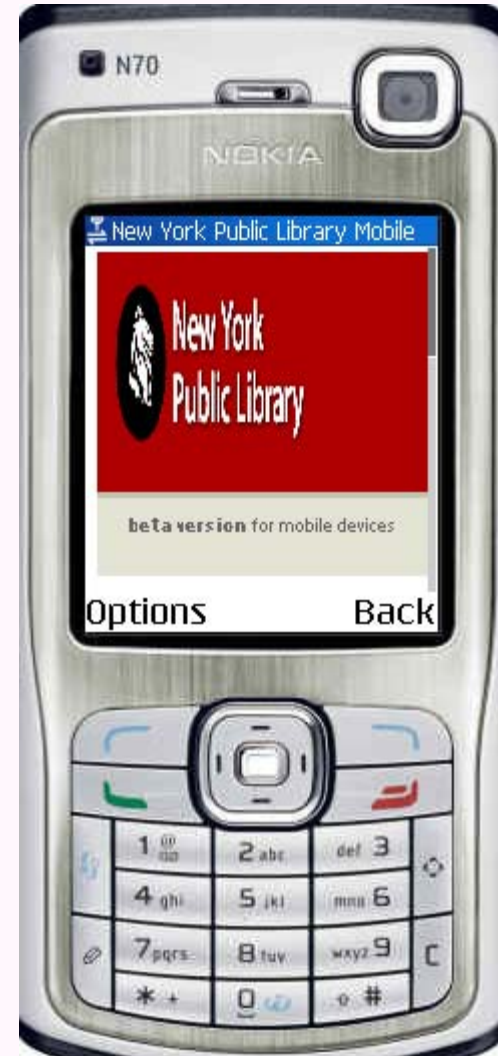
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<http://m.nypl.org/>







- ▼ SEARCH THE COLLECTION
- ▼ BROWSE SUBJECTS
- ▼ SERVICES
- ▼ LIBRARY INFORMATION
- ▼ COMMUNITY
- ▼ NEWS & EVENTS

## Hoping for the Right Job Fit?



**MY LIBRARY:** My Account | Course Reserves | Alerts | Library Tools | RefWorks

Search:

Go

FAQ | Site Index

- Most Used -

### Search the Collection

Catalog  
Find Articles  
Journals  
Databases  
Reference Tools  
Special Collections  
NCSU Scholarly  
Publications  
**more ...**



Agriculture  
Design  
Education  
Engineering  
Humanities  
Life Sciences  
Management

Mathematics  
Natural Resources  
Physical Sciences  
Social Sciences  
Textiles  
Veterinary Science

Technology Lending  
Reserves  
Tripsaver  
Borrow | Renew  
Computing  
For Faculty  
Copyright Guidance  
Citation Builder  
LOBO  
**more ...**

**Library  
Tools**  
  
**for courses**



### Library Information

Hours  
Directions  
Library Locations  
Quick Guide (pdf)  
Directories  
Visitors  
Jobs  
**more ...**



*James B. Hunt Jr.  
Library*

### Community

Learning Commons  
Giving to the Libraries  
Friends of the Library  
Exhibits  
Calendar  
WolfBlogs | WolfWikis  
**more ...**



*GroupFinder*

### News & Events

One Search to Find  
Them All  
The Right Fit—Loving  
Animals and Loving  
Her Job



**NC Architects  
& Builders  
Web site**

Spring Registration for  
DELTA Workshops and Seminars  
**more ...**

#### NCSU Libraries

2 Broughton Drive | Box 7111 | Raleigh, NC 27695-7111 | phone: (919) 515-3364

**NCSU LIBRARIES** Search the Collection | Browse Subjects | Services | Library Information | Community | News & Events | WolfWise





<http://www.lib.ncsu.edu/m/home/>



# Problem Statement

Patrons are growing accustomed to using mobile phones to access online Web sites for information, but OSU Libraries' Web pages are too long and cumbersome for small screen viewing.



Solution: <http://m.library.orst.edu/>



# Stage 1 – Guiding scenarios

Students



Unhindered by Talent



General Public

Library Staff



acpl





# What to include on a mobile site?

- ➡ Time saving applications
- ➡ Location sensitive information
- ➡ Expose native capabilities
- ➡ Not everything! No long documents!





# Stage 1 – Make a Plan

- ➡ Break up project into stages
- ➡ Understand the mobile user
- ➡ Identify content to make mobile
  - ⇒ Main site use stats
  - ⇒ Mobile context
  - ⇒ Stakeholder feedback
  - ⇒ Fast, easy, fun
- ➡ Conduct environmental scan
- ➡ Select target mobile devices
- ➡ Build on existing web services



# Stage 1 – Select Content

Library Hours

Ask a Librarian

Chat client / Lnet

Email

Ref desk hours

Phone #

SMS Contact

Address / Phone #

SMS Directions

Google Map

How Do I ?

Where is it?

Floor Maps

Call Numbers



# Stage 2 – Guiding scenarios

Students



Unhindered by Talent



Brandon Cirillo

General Public

Library Staff



acpl



# Stage 2: Add New Features

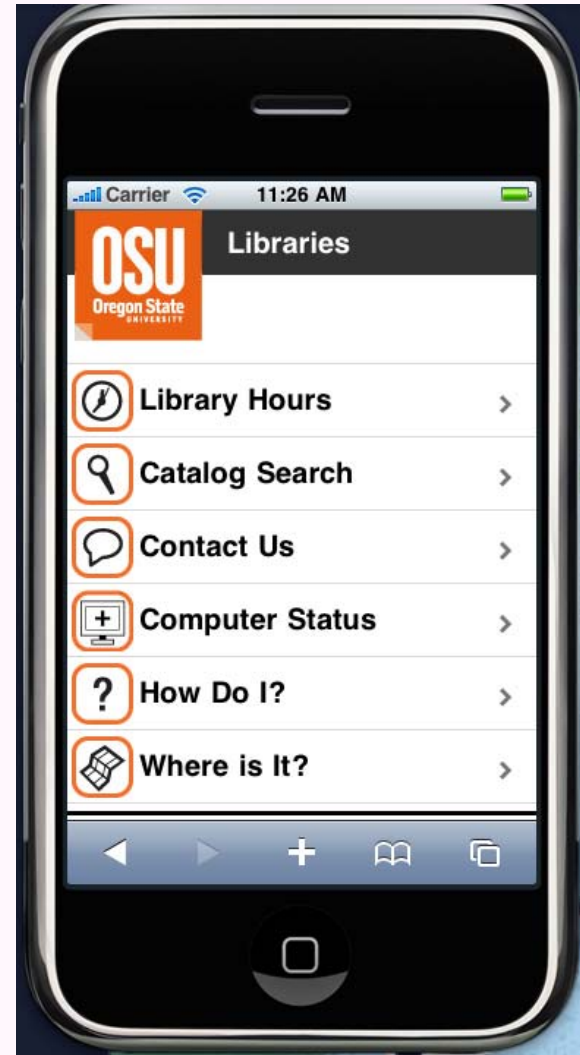
## ➡ Based on Feedback

- Poll Winners
  - Catalog
  - Text Call Numbers
- Emails
  - Catalog

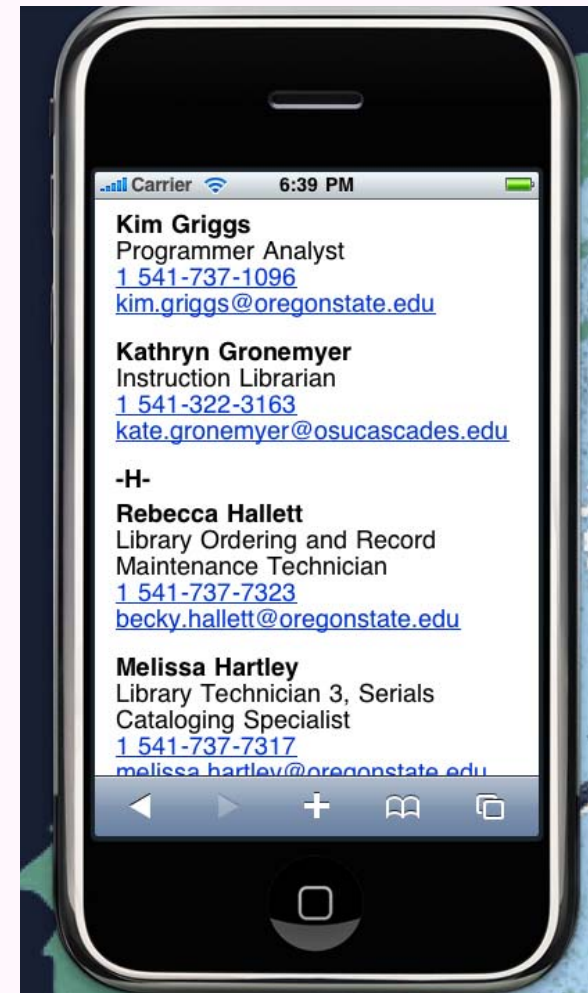
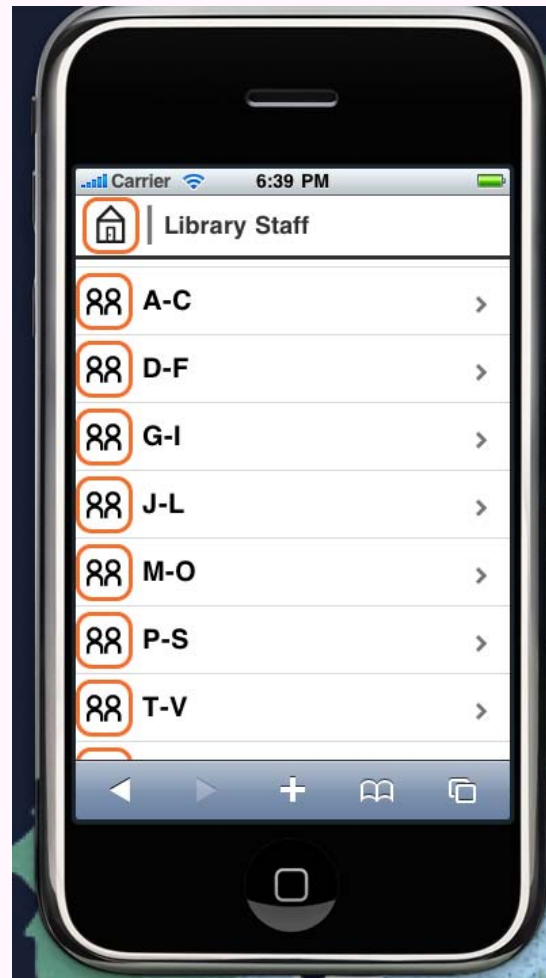
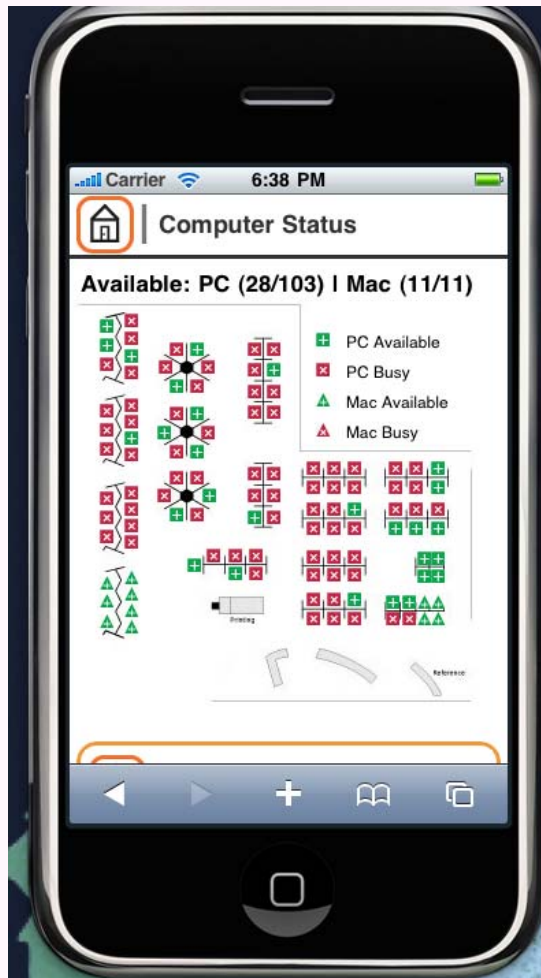
## ➡ Based on Use Stats

### Top Pages

- Hours
- Ask a Librarian
- Text Contact
- Text Directions

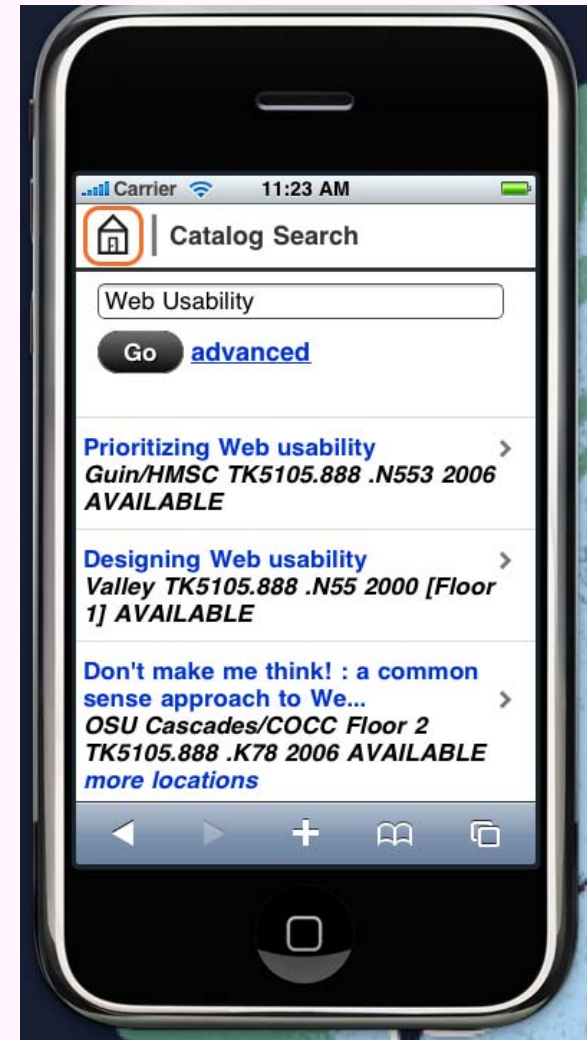
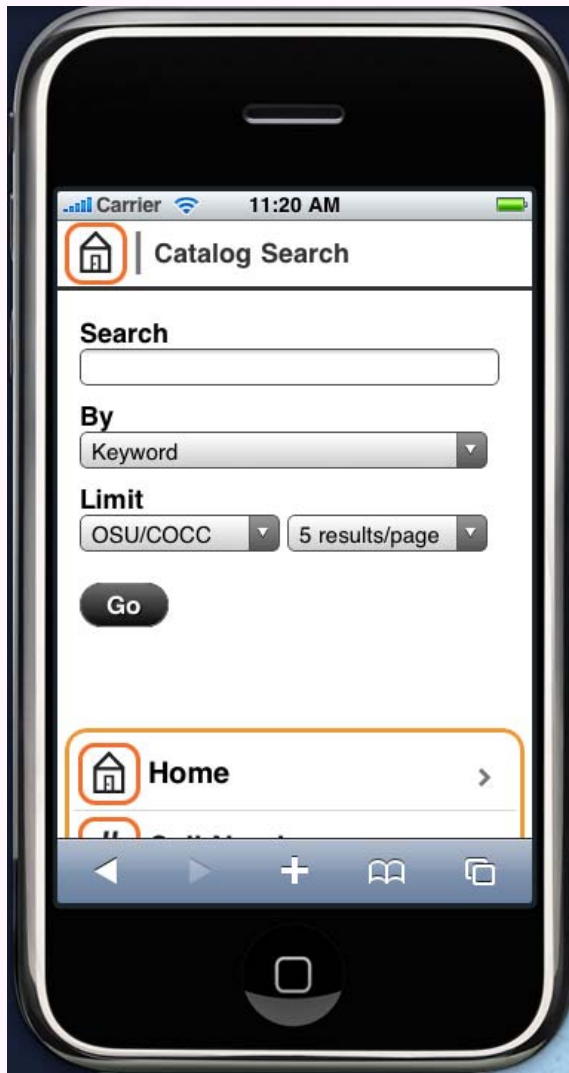


# Stage 2: Computer Status & Staff Directory

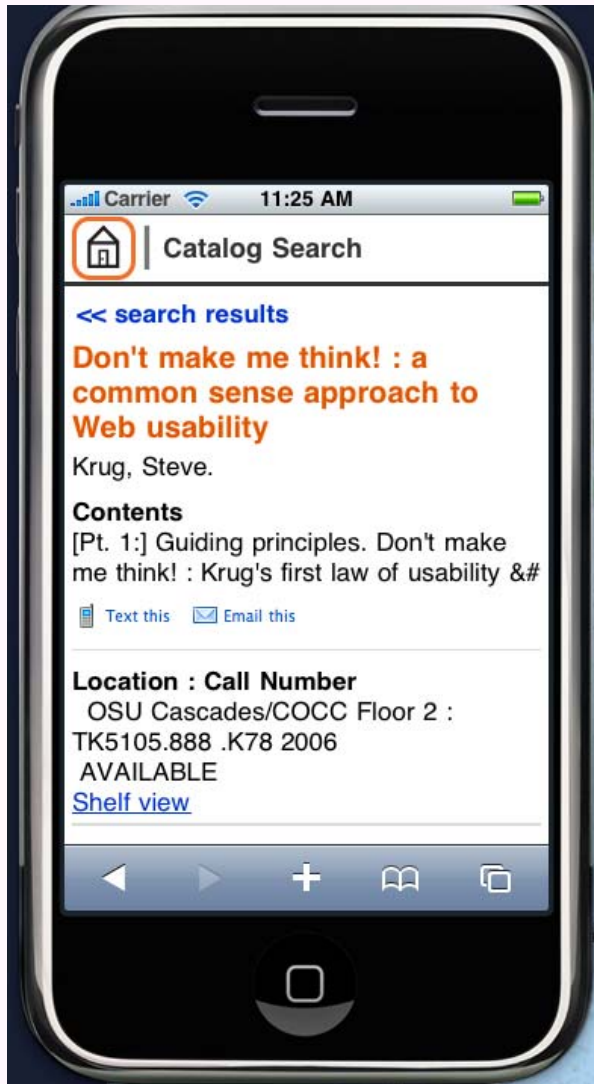




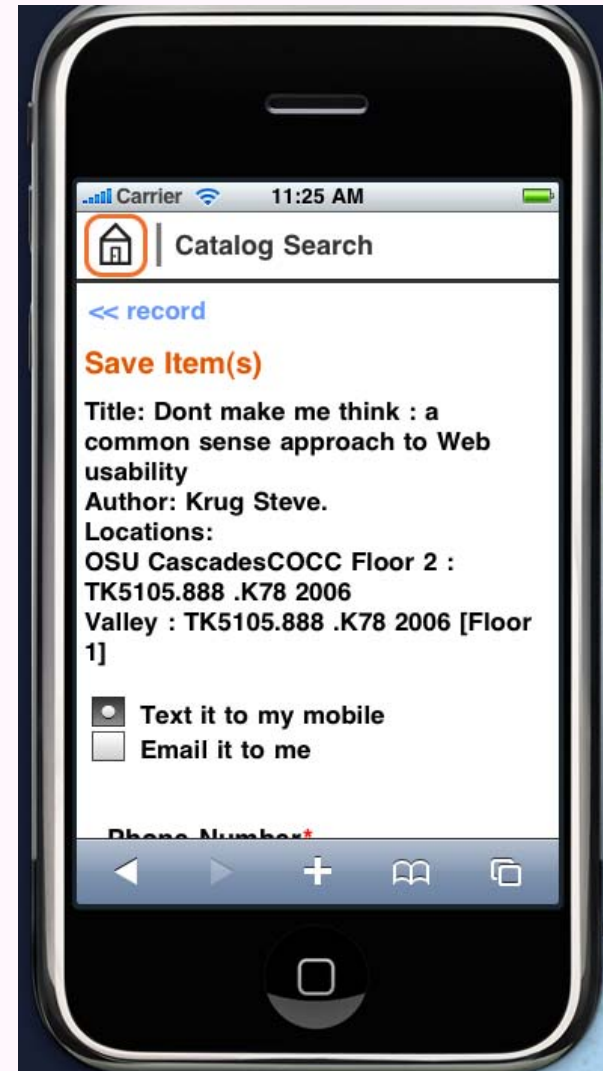
# Stage 2 – Catalog Search



# Stage 2 – Catalog Results



Item Record



Save Items SMS



# Stage 2 - Assessment & Feedback

Average Unique Visitors: **99** a day

Average Number of pages viewed per visit: **3**

Average Time spent per visit: **4** min

## Top 5 Pages

- Computer Status
- Catalog Search
- Hours
- Floor maps
- Call Number

## Mobile Devices

- iPhones: 75%
- DoCoMo web phones: 9%
- Feature phones (Blackberry, LG, Samsung): 12%



# Stage 2 - Promotion

- ➔ Use Mobile URLs
  - ➔ m.your-domain
  - ➔ mobile.your-domain
  - ➔ your-domain/mobile

A screenshot of a web form titled 'Get Yahoo! for mobile'. The form has a purple background. It asks the user to 'Enter your mobile number.' with three input fields and a checkmark icon. Below the number fields is a dropdown menu showing 'United States' with a flag icon and a '[change]' link. A blue link 'What's this?' is also present. A large yellow button with the text 'Send a link to my phone' is prominent. At the bottom, it says 'Mobile charges may apply.' and provides the URL 'm.yahoo.com' as an alternative way to access the mobile site.

- ➔ Link on main website (header, menu, footer)
- ➔ SMS link service
- ➔ Add to mobile aggregators and directories
- ➔ Library & campus news
- ➔ Advertise on home page

[Mobile Site](#)



# Mobile Development

- ➡ Mobile Strategy Approaches
  - ➡ Limitations & Constraints
  - ➡ Mobile Domain
  - ➡ Device Path



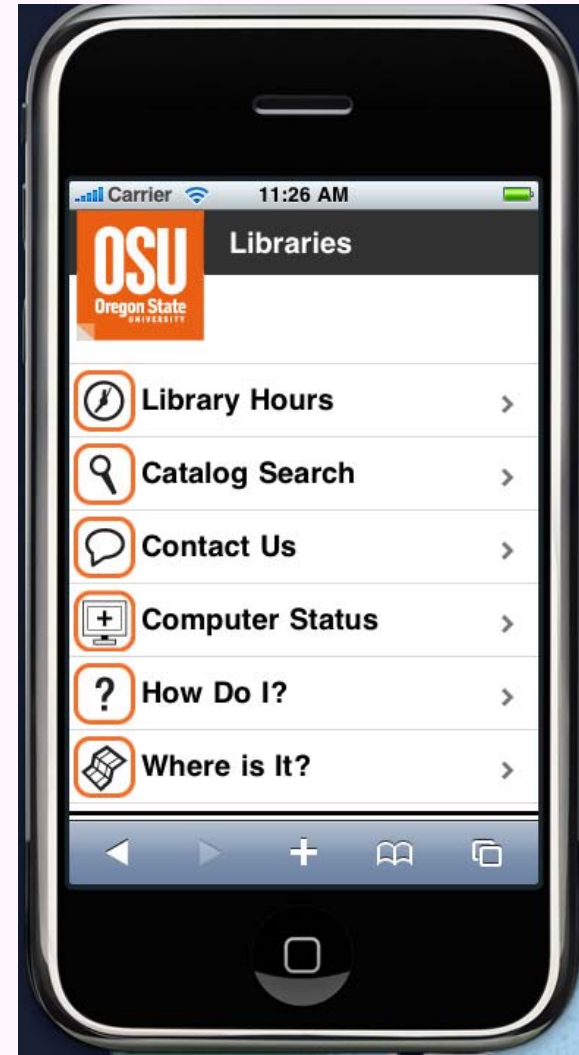


# Optimal Mobile Experience

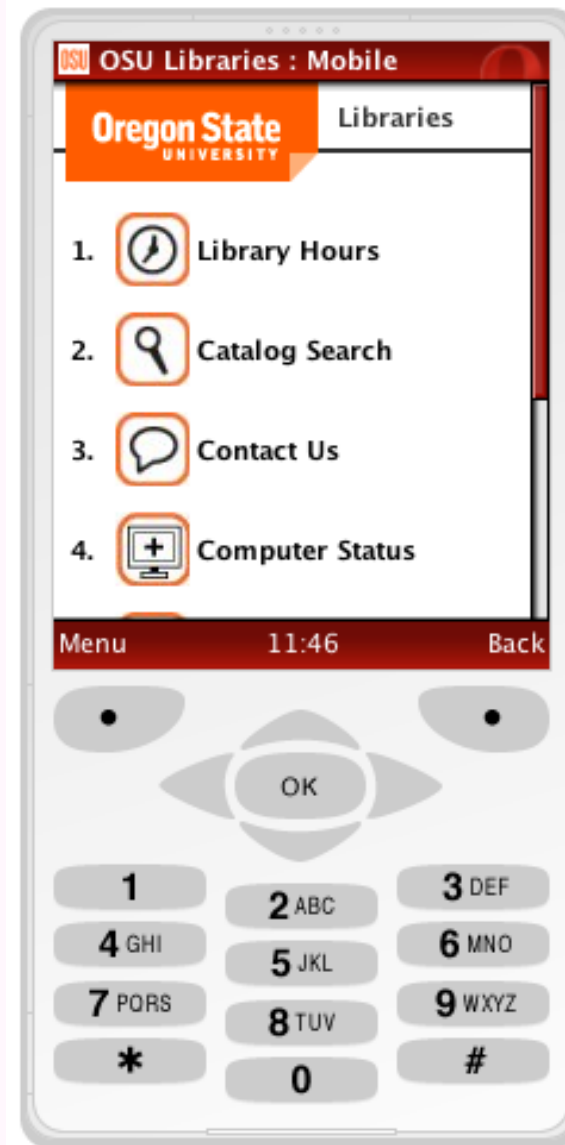
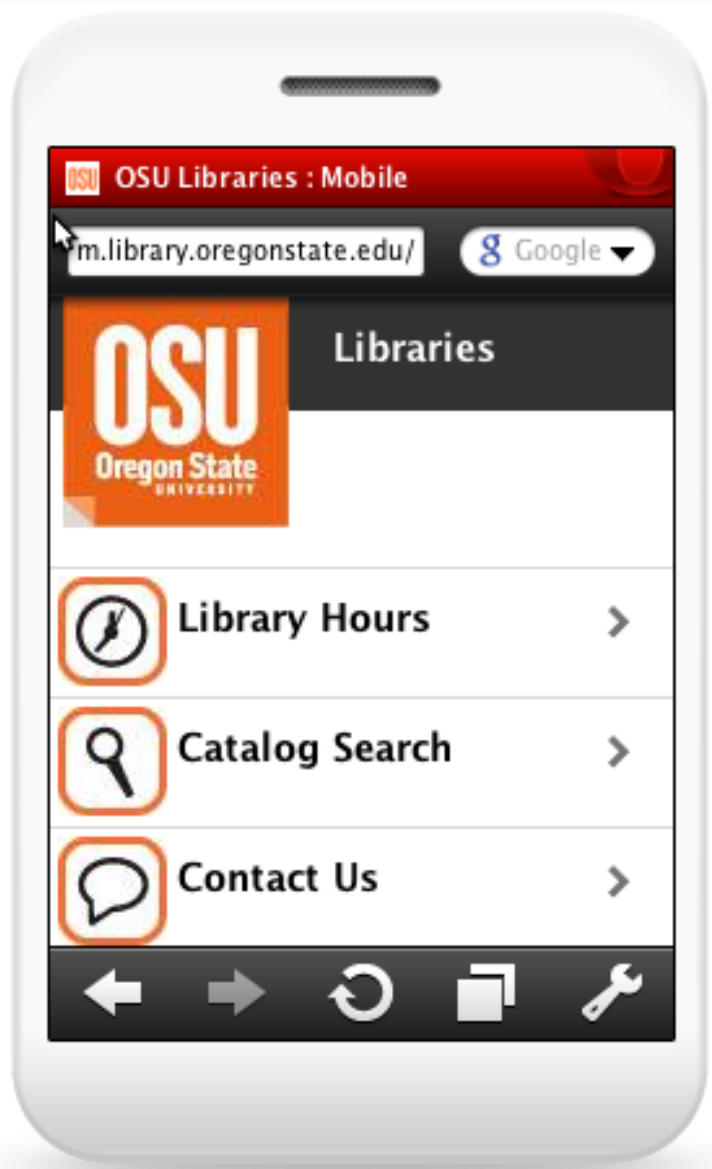
*People with disabilities using computers have similar interaction limitations as people without disabilities who are using mobile devices. Both experience similar barriers when interacting with Web sites.* (Web Accessibility Initiative, 2009)



# Adaptation Techniques



# Media Types and Queries



# Media Types and Queries

```
<link rel="stylesheet" href="screen.css"  
      media="screen"/>
```

```
<link rel="stylesheet" href="handheld.css"  
      media="handheld"/>
```

```
@media screen { /* rules for computer screens */  
}
```

```
@media handheld { /* rules for handheld devices  
*/ }
```



# Media Types & Queries

Handheld	OpenWave browser, Nokia lite-web browsers, Netfront (configuration dependent), Digia, BlackBerry browser, Opera Mini until v4, Opera Mobile until v9
Screen & Handheld	Palm's Blazer, Nokia S40 browser, IEMobile 6.x and 8.x
Screen & Queries	iPhone's Safari, Opera Mobile starting v9, Opera Mini starting v4
Screen	Nokia S60 browser, Netfront (configuration dependant), Teleqa Q7, IEMobile 7.x







## Technique 2: Browser Sniffing



# User Agents



```
$currUA =  
strtolower($_SERVER['HTTP_USER_AGENT']);  
if ((strpos($currUA, 'Agent Smith')>0){  
  header( 'Location: http://mobile.matrix.com'  
  )  
}
```



# Feature Detection



[wurfl.sourceforge.net](http://wurfl.sourceforge.net)



# Technique 3: Automatic Adaptation



<http://wurfl.sourceforge.net/java/wall.php>



# Mobile Site Creation Tools



➡ Google's Conversion Utility



➡ MobiSiteGalore



➡ InstantMobilizer



➡ Drupal Mobile Tools

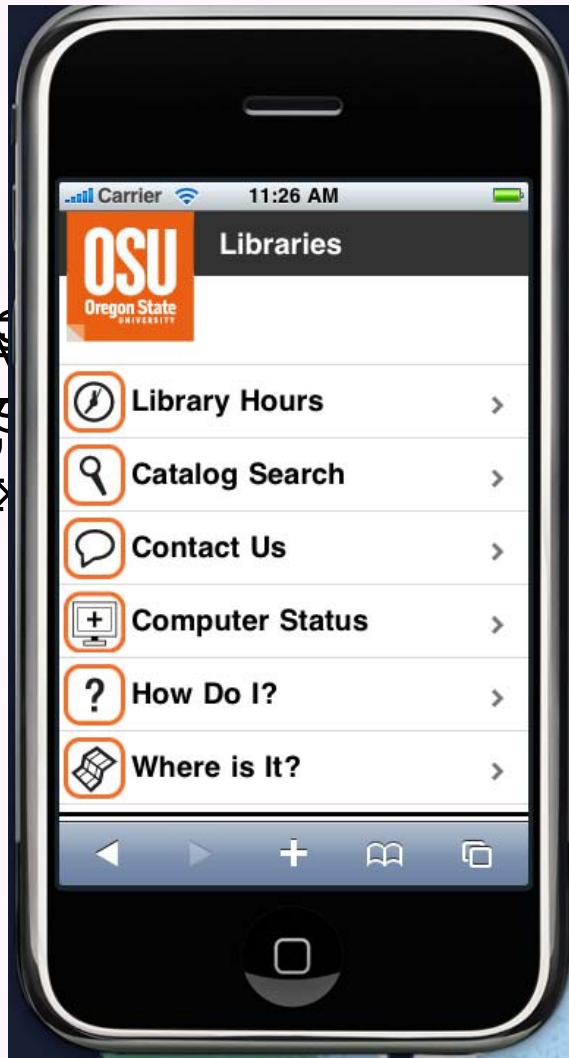


➡ RSS Feed





# iPhone Tips



```
<link rel="stylesheet" href="/css/iphone.css" media="only screen and (max-width:480px)" />
```

```
<link rel="stylesheet" href="/css/iphone.css" media="only screen and (max-width:480px)" />
```



# Design Recommendations

- ➡ Don't make the user click more than 3 times
- ➡ Assign each navigation link an access key number
- ➡ Include link to full Web site
- ➡ Keep URLS short and do not use &,\_,-
- ➡ Do not rely on support of style sheets, fonts, color & javascript
- ➡ Use selects, checkboxes and radios over textboxes
- ➡ Keep images to a minimum and compress
- ➡ Place a link to the mobile home and back links at the top
- ➡ Place related links below the main content
- ➡ Use tried and true design patterns





# Validation Tools



# Mobile Testing



# Stage 3 - Expand Services

- ⇒ Databases
- ⇒ Room Reservation
- ⇒ Library Account
- ⇒ News & Events
- ⇒ Text-a-Librarian
- ⇒ SMS Alerts





# Resources

- Library/mobile: Tips on Designing and Developing Mobile Web Sites; Griggs et al; Code4Lib Journal 8
- iPhone Human Interface Guidelines
- dotMobi
- W3C Mobile Best Practices



# Presentation Link

- <http://www.slideshare.net/guestf4e976/library20in20-your20-pocket-slideshare1>

